



WHAT IS CLAIMED IS:

1                   1.       A crosslinkable polymer composition in the form of its aqueous  
2 polymer dispersion or polymer powder, comprised of:

3                   A) a copolymer having a glass transition temperature  $T_g$  or a melting  
4 temperature of  $\geq 30^\circ\text{C}$  and containing units derived from one or more comonomers  
5 selected from the group consisting of vinyl esters of branched or unbranched  
6 alkylcarboxylic acids of 1 to 18 carbon atoms, acrylic esters or methacrylic esters of  
7 branched or unbranched alcohols of 1 to 15 carbon atoms, dienes, olefins, vinyl  
8 aromatics and vinyl halides and from 0.1 to 50% by weight, based on the total weight  
9 of the comonomers, of one or more ethylenically unsaturated carboxyl-containing  
10 comonomers, and

11                  B)       a copolymer containing units derived from one or more  
12 comonomers selected from the group consisting of vinyl esters of branched or  
13 unbranched alkylcarboxylic acids of 1 to 18 carbon atoms, acrylic esters or  
14 methacrylic esters of branched or unbranched alcohols of 1 to 15 carbon atoms,  
15 dienes, olefins, vinyl aromatics and vinyl halides and from 0.1 to 50% by weight,  
16 based on the total weight of the comonomers, of one or more ethylenically unsaturated  
17 comonomers having functional groups capable of entering a covalent bond with the  
18 carboxyl groups of said copolymer A).

1                   2.       A crosslinkable polymer composition as claimed in claim 1,  
2 wherein said carboxyl-containing comonomers copolymerized for said copolymer A)  
3 are ethylenically unsaturated mono- and dicarboxylic acids or maleic anhydride.

1                   3.       A crosslinkable polymer composition as claimed in claim 2,  
2 wherein one or more comonomers are selected from the group consisting of acrylic  
3 acid, methacrylic acid, crotonic acid, itaconic acid, fumaric acid, maleic acid and  
4 maleic anhydride.

1                   4.       A crosslinkable polymer composition as claimed in claim 1,  
2 wherein said copolymer A) contains 1 to 30% by weight of carboxyl-containing  
comonomer units.

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1                   5.     A crosslinkable polymer composition as claimed in claim 1,  
2     wherein said copolymer B) comonomers     having crosslinking, functional groups  
3     include one or more selected from the group consisting of comonomers having an  
4     epoxide, organo, halogen, hydroxyl, aziridine, carbodiimide, oxazoline, alcohol,  
5     amine, aminosilane, amino-formaldehyde, isocyanate and N-2-hydroxyalkylamide  
6     moiety.

1                   6.     A crosslinkable polymer composition as claimed in claim 5,  
2     wherein one or more ethylenically unsaturated comonomers having epoxide, hydroxyl  
3     and isocyanate groups have been copolymerized.

1                   7.     A crosslinkable polymer composition as claimed in claim 6,  
2     wherein one or more comonomers are selected from the group consisting of glycidyl  
3     acrylate, glycidyl methacrylate, allyl glycidyl ether, vinyl glycidyl ether, hydroxyethyl  
4     acrylate, hydroxypropyl acrylate, hydroxybutyl acrylate, hydroxyethyl methacrylate,  
5     hydroxypropyl     methacrylate, hydroxybutyl     methacrylate, 2-methyl-2-  
6     isocyanatopropyl methacrylate and isopropenyl dimethylbenzyl-,isocyanate (TMI).

1                   8.     A crosslinkable polymer composition as claimed in claim 1,  
2     wherein said copolymer B) contains 1 to 30% by weight of units derived from  
3     comonomers containing crosslinking groups, based on the total weight of the  
4     comonomers.

1                   9.     A crosslinkable polymer composition as claimed in claim 1,  
2     wherein the blend ratio of said two copolymers A) and B) is in the range from 1:99  
3     to 99:1.

1                   10.    A crosslinkable polymer composition as claimed in claim 1,  
2     wherein said copolymers A) and B) are present in such a ratio that the molar ratio of  
3     functional comonomer units of copolymer A) to copolymer B) is in the range from 5:1  
4     to 1:5.

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1                   11. A crosslinkable polymer composition as claimed in claim 1,  
2 wherein said copolymers A) and B) are present in such a ratio that the molar ratio of  
3 functional comonomer units of copolymer A) to copolymer B) is in the range from 2:1  
4 to 1:2.

1                   12. A crosslinkable polymer composition as claimed in claim 1,  
2 wherein said copolymer A) is a carboxyl-functional styrene-n-butyl acrylate and/or  
3 styrene-methyl methacrylate-n-butyl acrylate copolymer and said copolymer B) is a  
4 glycidyl methacrylate-containing styrene-n-butyl acrylate and/or styrene-methyl  
5 methacrylate-n-butyl acrylate copolymer.

1                   13. A process for preparing crosslinkable polymer compositions as  
2 claimed in claim 1, which comprises preparing said copolymer A) and said  
3 copolymer B) by solution or aqueous emulsion polymerization.

1                   14. A process as claimed in claim 13, wherein both said copolymer  
2 and said copolymer B) are prepared by emulsion polymerization and, optionally, the  
3 thereby obtainable dispersions are dried.

1                   15. A process as claimed in claim 14, wherein said emulsion-  
2 polymerized aqueous dispersions obtained for said copolymers A) and B) are blended  
3 with each other and subsequently dried.

1                   16. A process as claimed in claim 14, wherein said emulsion-  
2 polymerized aqueous dispersion obtained for said copolymers A) and B) are each  
3 initially dried and said copolymers A) and B) are blended in the specified blend ratio  
4 in powder form.

1                   17. A method for preparing shaped articles from fibrous or  
2 particulate materials, which comprise contacting said materials with the crosslinkable  
3 composition of claim 1 as at least one binder and effecting crosslinking of said  
4 materials.

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1                   18.     The method of claim 17, wherein said polymer composition is  
2     present in an amount of 3 to 50% by weight, based on the material to be bound.

1                   19.     The method of claim 17, wherein said polymer composition is  
2     present in dry, pulverulent form, in the form of an aqueous dispersion or in solvent-  
3     dissolved form.

1                   20.     The method of claim 17, wherein said polymer composition is  
2     present as a water-redispersible powder.

1                   21.     The method of claim 17, wherein said polymer composition is  
2     present as a prebinder in fiber mats, wovens and nonwoven scrims for fiber-reinforced  
3     plastics.

1                   22.     The method of claim 17, wherein said polymer composition is  
2     present as a binder for preforming applications of wovens and nonwoven scrims in  
3     fiber-reinforced plastics.

1                   23.     The method of claim 17, wherein said polymer composition is  
2     present as a dry binder in combination with other pulverulent organic or inorganic  
3     substances.

1                   24.     The method of claim 17, wherein said polymer composition is  
2     present as a binder for laminating fiber mats onto expanding or expanded bead foam.

1                   25.     The method of claim 17, wherein said polymer composition is  
2     present for laminating two or more wovens, nonwoven scrims or nonwovens together,  
3     as a binder between the two substrates to be adhered together.

1                   26.     The method of claim 17, wherein said polymer composition is  
2     present in powder form for binding pulverulent substrates in fiber materials.

- 1                   27.    The method of claim 17, wherein said polymer composition is
- 2    present for in-mold skinning of expanding bead foam.

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